Office of Air Quality *December, 2005*

(800) 451-6027 *www.IN.gov/idem/air*

2005 Ozone Season Summary Report

The purpose of this report is to summarize the ozone levels and trends throughout Indiana during the 2005 ozone season. In July 1997, U.S. EPA established a stricter standard for ozone. The new health standard became 85 parts per billion (ppb) averaged over an eight hour period and attainment and nonattainment areas were designated on April 15, 2004. An area is considered in violation of the standard when the three-year average of the fourth highest value for each ozone season is equal to or greater than 85 ppb, know as the design value. This method of monitoring ozone levels is considered more protective of people who work and play outside in the summer. Up until this year, Indiana monitored ozone levels for compliance with two standards: the one-hour standard of 124 ppb measured over one hour and the eight-hour standard. However, as a provision of the new designations, the U.S. EPA revoked the one hour standard on June 15, 2005.

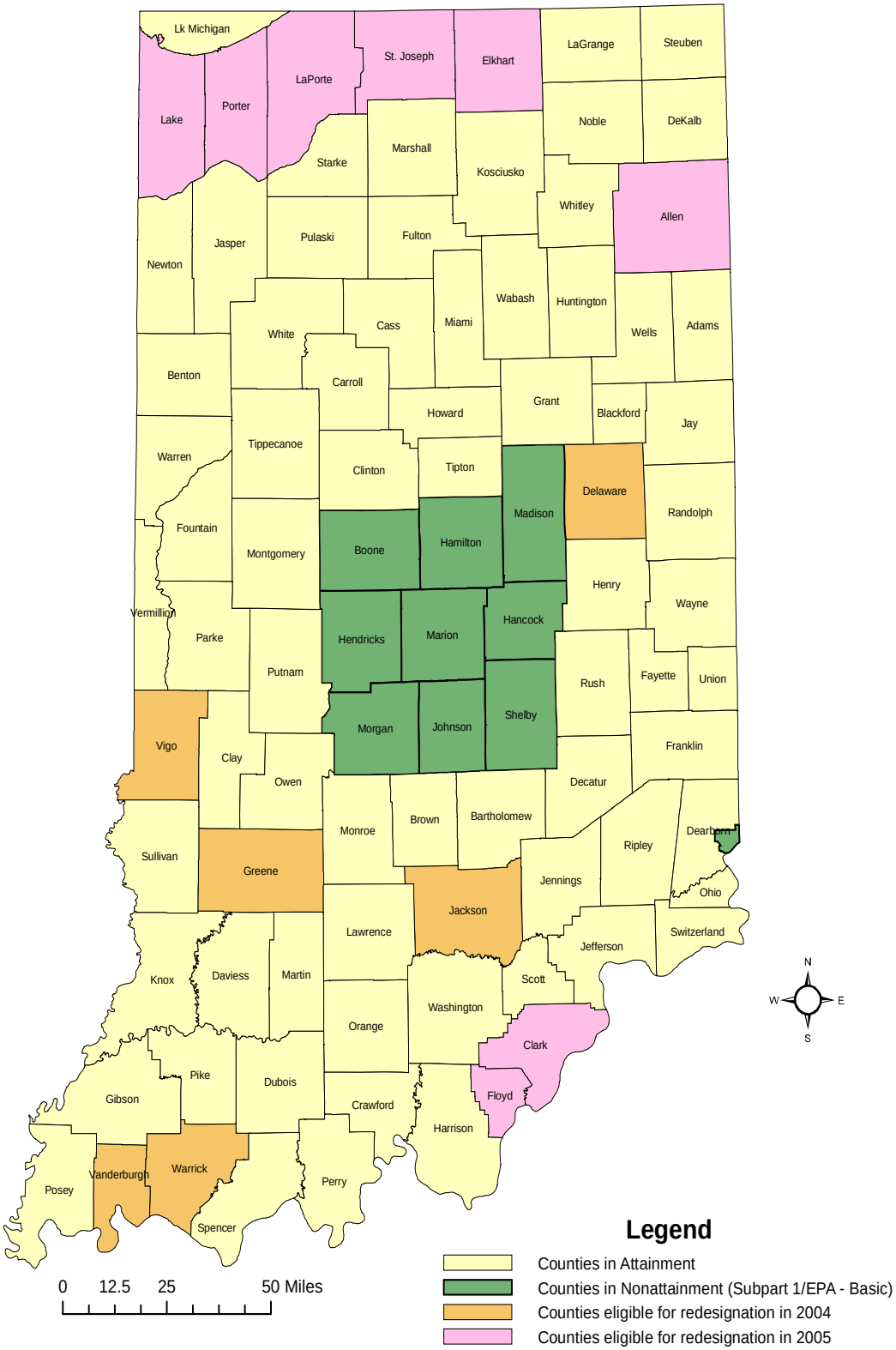
Indiana monitors ozone in areas where levels are expected to be higher because of the effects of population density and manufacturing activities and where more citizens may be exposed to unhealthy air. IDEM and local air agencies collect data from 41 ozone monitors across Indiana. The only monitoring change in 2005 took place in Warrick County where the Alcoa monitor in Yankeetown was moved to the Dayville site in Newburgh.

On April 15, 2004, U.S. EPA announced areas designated nonattainment for the new 8-hour standard. In its initial announcement, 23 counties and one township in Indiana were identified as being in violation of the new 8-hour standard of 85 ppb. At the close of the 2004 ozone season, six counties had already met the standard, which made them eligible to apply for redesignation to attainment. The counties that qualified were Delaware, Greene, Jackson, Vigo, Vanderburgh and Warrick. Redesignation Petitions and Maintenance Plans have been sent to U.S. EPA for processing and approval is expected by late 2005.

At the close of the 2005 ozone season, 31 of Indiana's 41 ozone monitors had a 4th high value below the standard and 40 out of 41monitors had a three year average that met the standard, leaving only one monitor in Hamilton County exceeding the standard. Additionally, eight more counties met the standard at the end of the 2005 ozone season and became eligible to apply for redesignation to attainment status. These counties are Allen, Clark, Floyd, Elkhart, St. Joseph, Lake, LaPorte and Porter. IDEM is in the preliminary stages of writing Redesignation Petitions and Maintenance Plans for these areas.

For more information regarding ozone, visit http://www.in.gov/idem/air/ or contact Laurence Brown of the Office of Air Quality at (800) 451-6027, ext. 4-3097 or by e-mail at lbrown@idem.IN.gov.

Indiana 8-Hour Ozone Designations as of November 2005



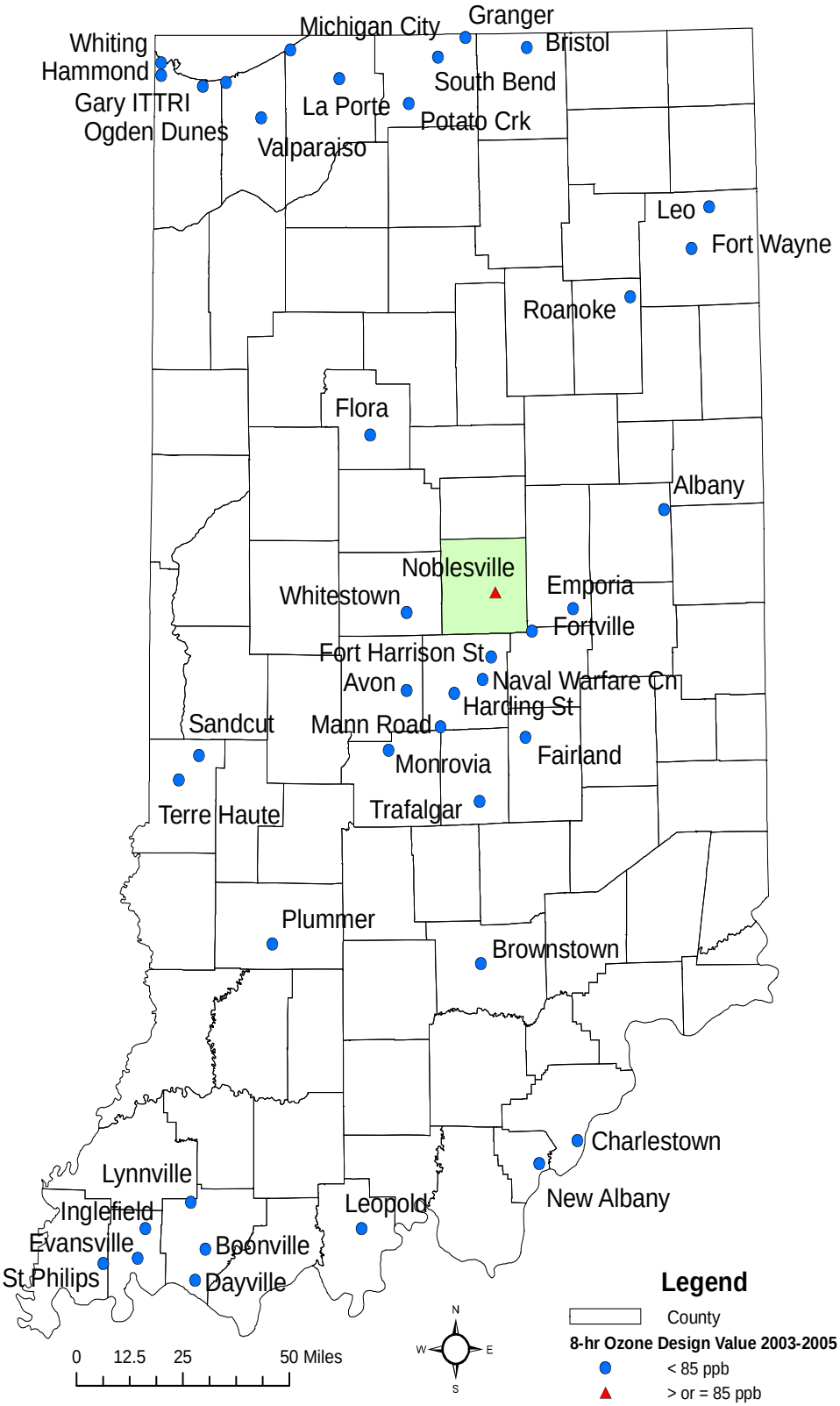
Ozone Values by Monitor Site

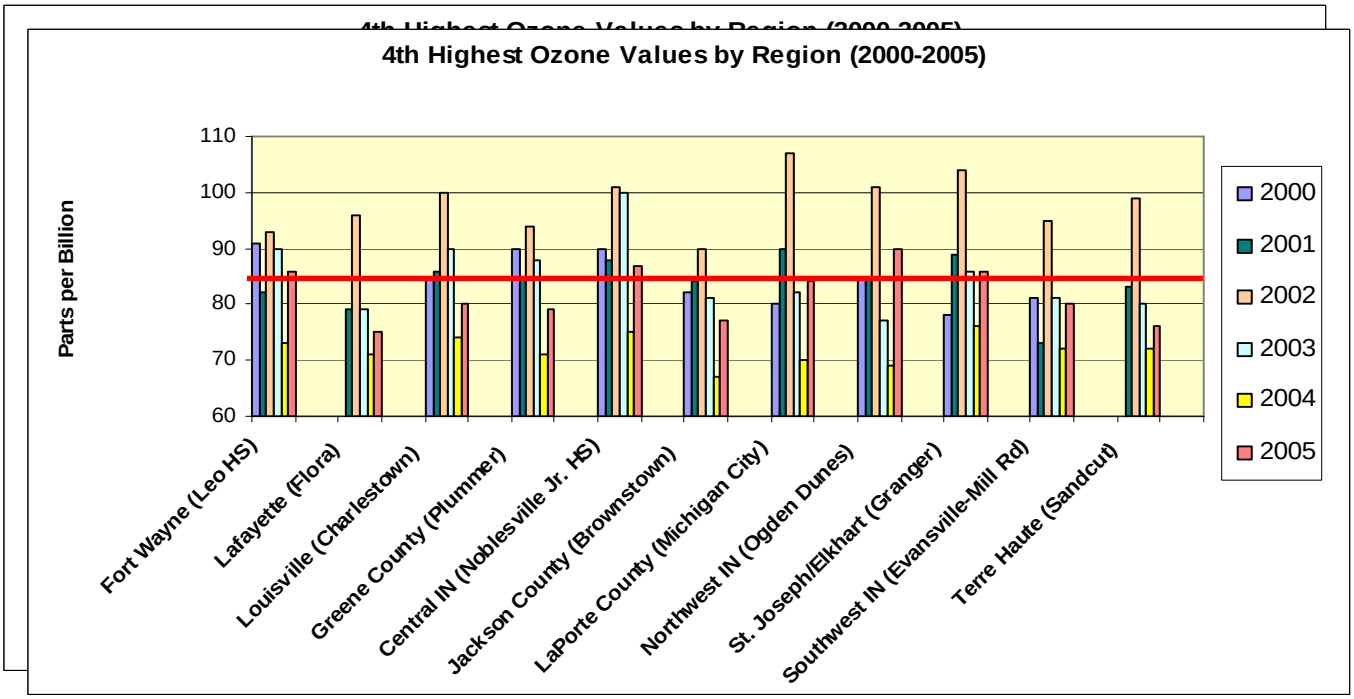
County	Site	2005 4th High*	2003-2005 Design Value*	County	Site	2005 4th High*	2003-2005 Design Value*
							*Concentrations in parts per billion
Allen	Leo	86	83	Marion	Fort Harrison	80	81
Allen	Fort Wayne	76	76	Marion	Harding St	81	74
Boone	Whitestown	82	80	Marion	Mann Road	76	71
Carroll	Flora	75	75	Marion	Naval Warfare	80	77
Clark	Charlestown	80	81	Morgan	Monrovia	78	77
Delaware	Albany	81	78	Perry	Leopold Site began operating in Jan 2004.	86	82 2004-2005 average only
Elkhart	Bristol	86	83				
Floyd	New Albany	80	79	Porter	Ogden Dunes	90	78
Green	Plummer	79	80	Porter	Valparaiso	78	77
Hamilton	Noblesville	87	87	Posey	St. Phillips	77	75
Hancock	Fortville	80	81	Shelby	Fairland	80	80
Hendricks	Avon	78	76	St. Joseph	Granger	86	83
Huntington	Roanoke	78	76	St. Joseph	Potato Creek	78	77
Jackson	Brownstown	77	75	St. Joseph	South Bend	84	79
Johnson	Trafalgar	77	76	Vanderburgh	Evansville	80	77
Lake	Gary IITRI	89	76	Vanderburgh	Inglefield	56	63
Lake	Hammond	87	78	Vigo	Terre Haute	64	62
Lake	Whiting Site began operating in Jan 2004.	88	76 2004-2005 average only	Vigo	Sandcut	76	76
				Warrick	Yankeetown	Site Discontinued	Site Discontinued
La Porte	La Porte	89	80	Warrick	Boonville	80	76
La Porte	Michigan City	84	78	Warrick	Lynnville	76	73
Madison	Emporia	78	80	Warrick	Dayville	77	77 2005 average only

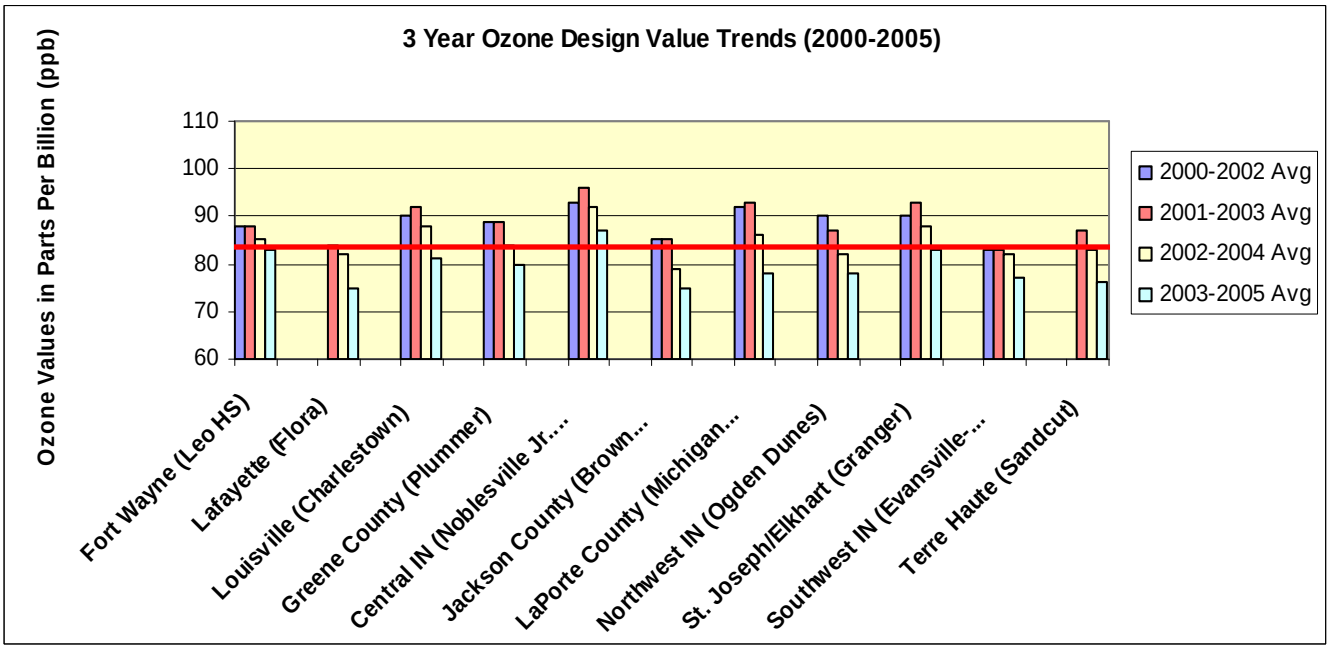
Values highlighted in blue exceed the 8 hour standard
Value in highlighted in green is a violation of the 3 year average

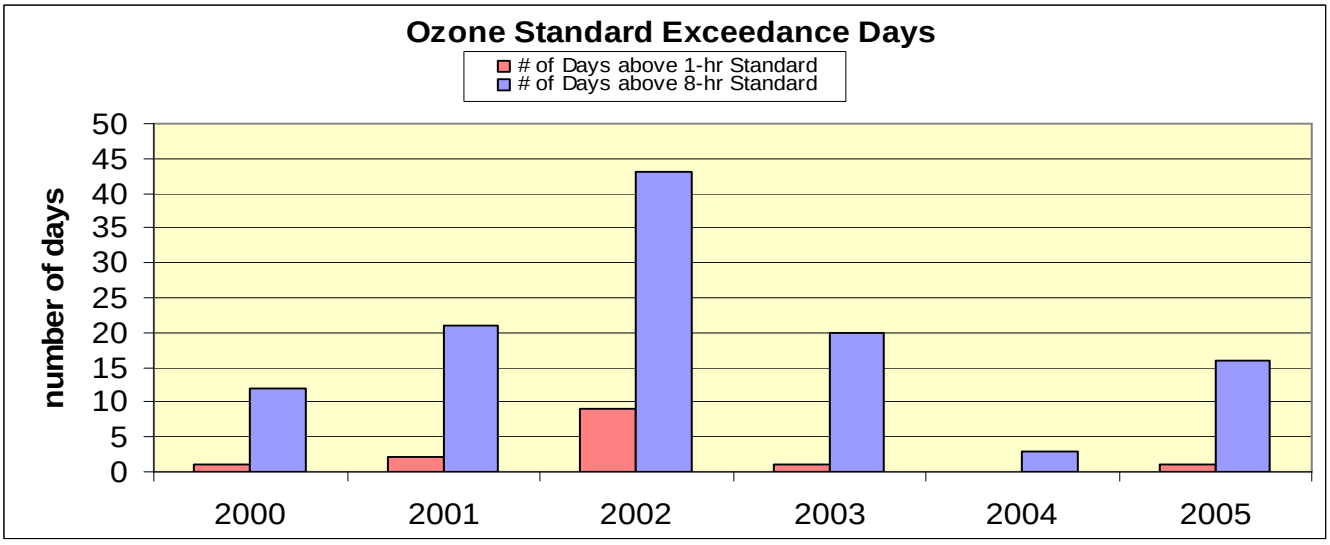
Exceedance versus Violation: An **exceedance** of the standard occurs when an 8-hour average value is equal to or greater than 85 parts per billion. A **violation** of the standard occurs when the 3-year average of the fourth highest value for each ozone season is equal to or greater than 85 parts per billion. A monitor can exceed the standard without being in violation.

Indiana 8-Hour Ozone Design Values
2003-2005









NOTE:
The 1 Hour Ozone Standard was revoked by U.S. EPA on June 15, 2005. However, for the sake of information, the two values in 2005 that exceeded the 1 hour standard of 124 ppb were included in the 2005 bar. The day was June 25, 2005 and the monitors were Ogden Dunes (144 ppb) and Gary IITRI (129ppb).

Days with Monitor Exceedances of the Ozone Standard

The chart below lists the number of days when monitor values exceeded the standard of 85 parts per billion during any rolling 8 hour period.

County	Location	2000	2001	2002	2003	2004	2005
Allen	Leo	4	2	13	4	0	8
Allen	Fort Wayne	1	0	15	3	0	0
Boone	Whitestown	2	3	13	6	1	1
Carroll	Flora	Monitor began operation in 2001	1	12	2	0	0
Clark	Charlestown	4	4	17	4	0	3
Delaware	Albany	Monitor began operation in 2001	3	12	5	0	2
Elkhart	Bristol	Monitor began operation in 2003		18	4	0	5
Floyd	New Albany	0	0	13	4	0	2
Greene	Plummer	4	5	14	4	0	0
Hamilton	Noblesville	4	4	17	5	0	4
Hancock	Fortville	4	8	18	5	0	1
Hendricks	Avon	4	3	9	2	0	1
Huntington	Roanoke	4	1	10	3	0	0
Jackson	Brownstown	3	2	9	0	0	1
Johnson	Trafalgar	3	2	11	2	0	1
Lake	Gary	1	3	8	0	0	7
Lake	Whiting	Monitor began operation in 2004				0	4
Lake	Hammond	4	8	18	2	0	5
LaPorte	Michigan City	3	8	15	2	0	3
LaPorte	LaPorte	3	0	15	3	0	4
Madison	Emporia	1	4	16	8	0	1
Marion	Mann Road	2	0	12	2	0	0
Marion	Fort Harrison	2	6	11	5	0	1
Marion	Harding Street	3	3	12	2	0	1
Marion	NAC	2	2	16	3	0	0
Morgan	Monrovia	5	2	13	2	0	0
Perry	Leopold	Monitor began operation in 2004				0	4
Porter	Ogden Dunes	4	4	12	1	0	7
Porter	Valparaiso	3	0	17	2	0	2
Posey	St. Phillips	5	0	13	1	0	1
St. Joseph	Potato Creek	1	2	14	1	0	0
St. Joseph	Granger	1	6	22	5	1	5
St. Joseph	South Bend	3	3	16	1	1	2
Shelby	Fairland	4	6	14	4	0	0
Vanderburgh	Evansville	1	0	16	2	0	1
Vanderburgh	Inglefield	0	0	5	1	0	0
Vigo	Terre Haute	1	2	2	0	0	0
Vigo	Sandcut		0	6	0	0	1
Warrick	Yankeetown	0	1	17	2	0	Monitor closed in 2005
Warrick	Boonville	0	1	13	2	0	2
Warrick	Lynnville	0	1	12	2	0	0
Warrick	Dayville	Monitor began operation in 2005					0

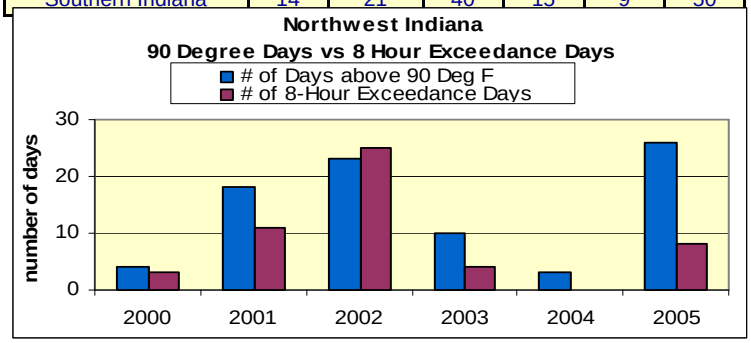
Ozone is created by a chemical reaction that takes place in the presence of sunlight and heat. High temperature days, particularly days when the temperature exceeds 90 ^{o} F, and stagnant weather patterns make conditions conducive to the formation of ground-level ozone. Therefore, an effective way to evaluate whether air quality is improving is to compare the annual number of 90 ^{o} days to actual ozone exceedances.

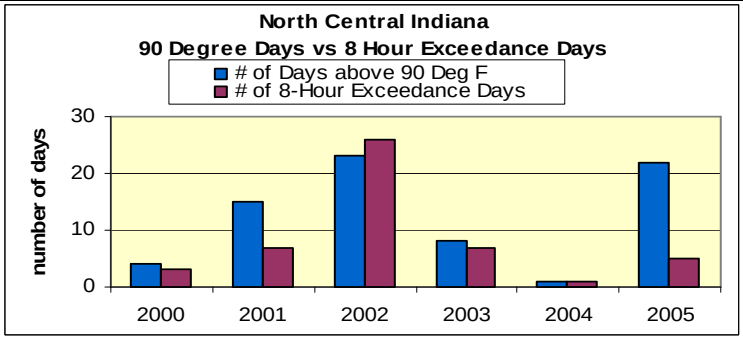
Number of 90 Degree Days 2000-2005

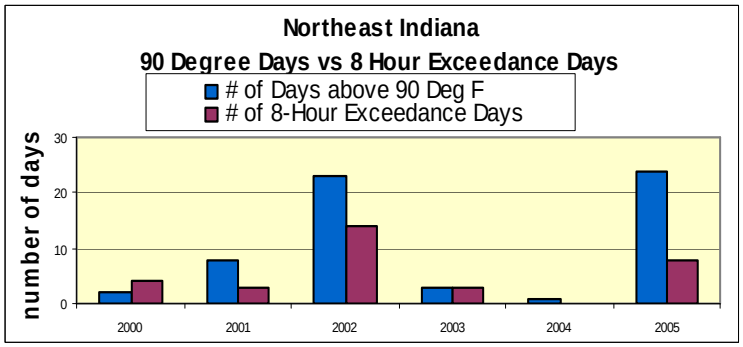
	2000	2001	2002	2003	2004	2005
Northwest Indiana	4	18	23	10	3	26
North Central Indiana	4	15	23	8	1	22
Northeast Indiana	2	8	23	3	1	24
Central Indiana	5	11	36	6	0	21
West Central Indiana	5	11	36	6	0	58
Southwest Indiana	22	30	56	23	9	46
Southern Indiana	14	21	40	15	9	50

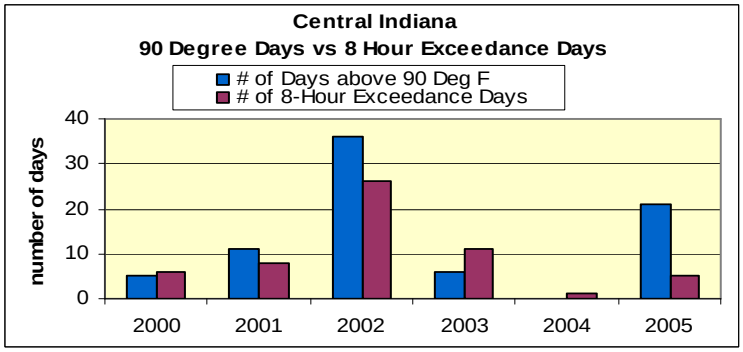
Number of 8-Hour Exceedance Days 2000-2005

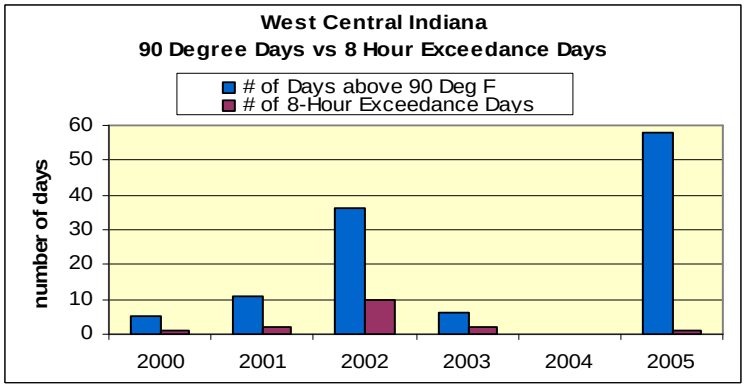
	2000	2001	2002	2003	2004	2005
Northwest Indiana	5	11	25	4	0	8
North Central Indiana	3	7	27	7	1	5
Northeast Indiana	4	3	14	3	0	8
Central Indiana	5	10	26	11	1	5
West Central Indiana	1	2	10	2	0	1
Southwest Indiana	5	1	20	1	0	4
Southern Indiana	4	4	19	4	0	3

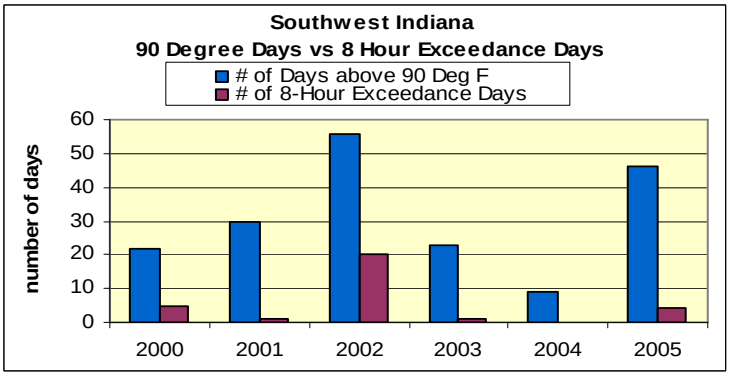


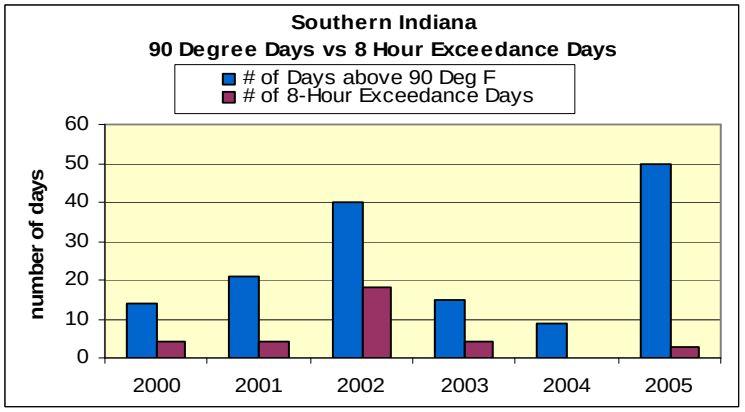












Ozone Monitors by Area of the State

Area	Counties
Northwest	Lake Porter LaPorte
North Central	Elkhart St. Joseph
Northeast	Allen Huntington
Central	Boone Delaware Hamilton Hancock Hendricks Johnson Madison Marion Morgan Shelby
West Central	Vigo
Southwest	Vanderburgh Warrick Posey
Southern	Clark Floyd

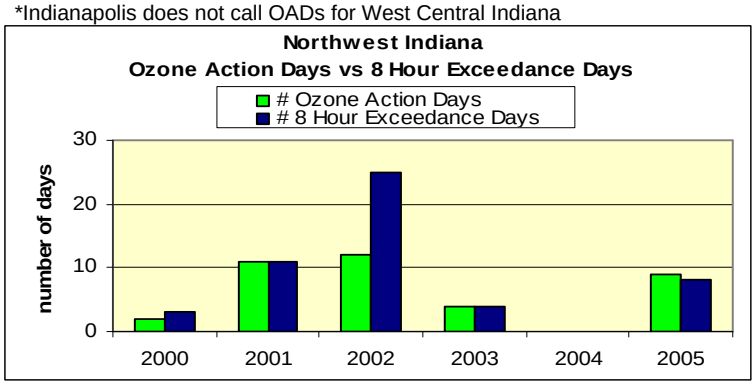
Number of Ozone Action Days 2000-2005

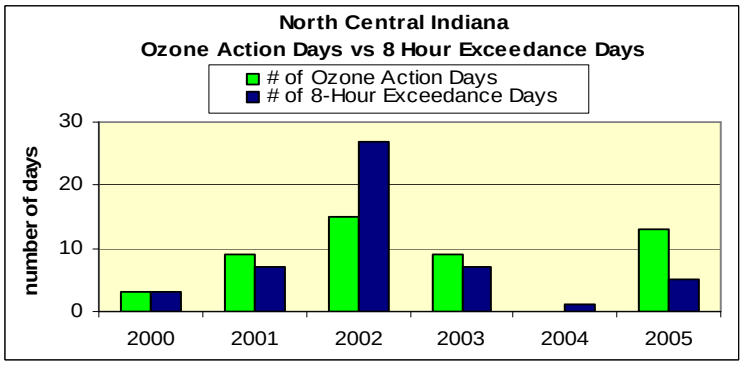
	2000	2001	2002	2003	2004	2005
Northwest Indiana	2	11	12	4	0	9
North Central Indiana	3	9	15	9	0	15
Northeast Indiana	5	6	14	6	0	12
Central Indiana	2	7	12	7	0	10
West Central Indiana*	0	0	0	0	0	0
Southwest Indiana	0	3	11	3	0	8
Southern Indiana	6	5	12	5	1	10

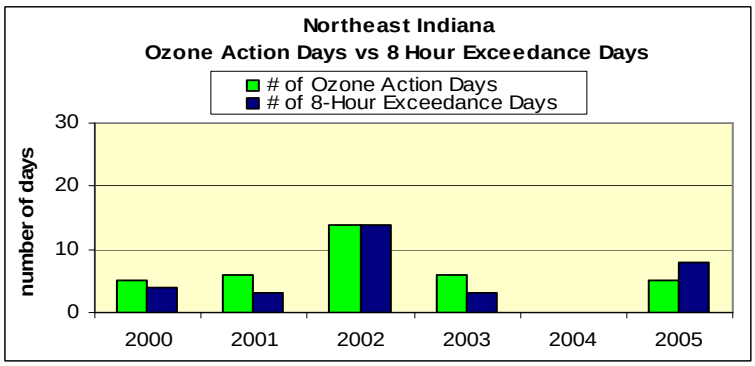
*Indianapolis does not call OADs for West Central Indiana

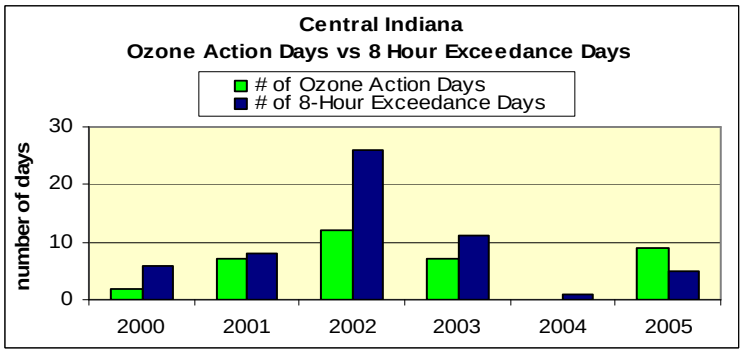
Number of 8-Hour Exceedance Days 2000-2005

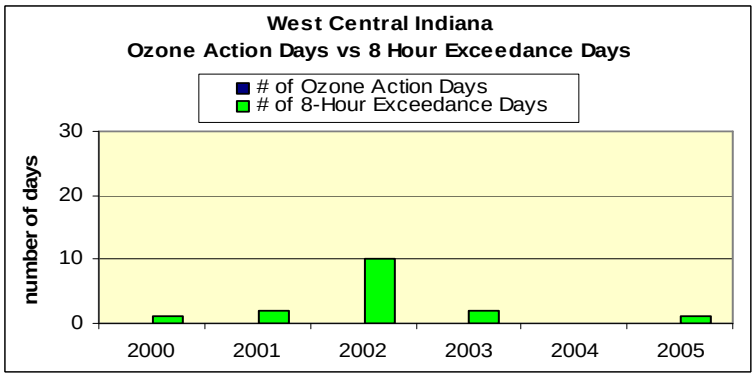
	2000	2001	2002	2003	2004	2005
Northwest Indiana	5	11	25	4	0	8
North Central Indiana	3	7	27	7	1	5
Northeast Indiana	4	3	14	3	0	8
Central Indiana	5	10	26	11	1	5
West Central Indiana	1	2	10	2	0	1
Southwest Indiana	5	1	20	1	0	4
Southern Indiana	4	4	19	4	0	3

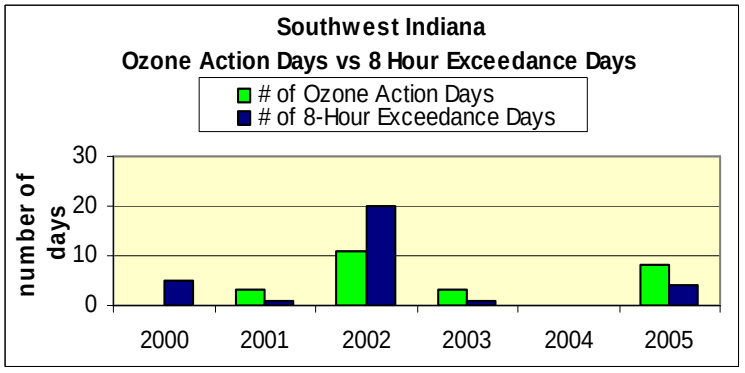


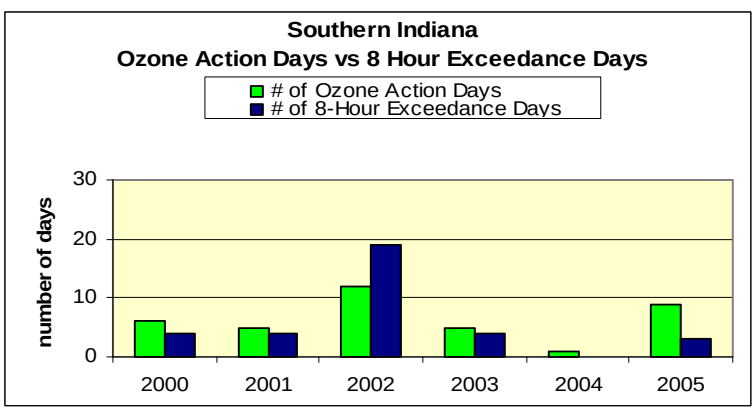












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